

AMENDMENTS TO THE SPECIFICATION

IN THE SPECIFICATION:

Page 1

Please amend the paragraph beginning at line 12 through line 19 as indicated below:

Long distance optical transmission systems that employ optical relay amplifier transmission systems that use an ~~erbium~~ erbium doped fiber amplifier (EDFA) that can directly amplify light of a 1.5 micrometer band have recently become a main trend. Further, recently, high capacity transmission systems using wavelength-division multiplexing transmission systems are realized by the EDFA that can amplify light in a wide band.

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Please amend the paragraph beginning at line 19 through line 24 as indicated below:

~~Some documents~~ Patent documents 1 and 2 disclose optical transmission apparatuses that transmit a signal by using an RZ (return-to-zero)-DPSK signal which is obtained by intensity modulating the NRZ-DPSK signal into an RZ signal, in addition to the NRZ-DPSK modulation system ~~(for example, patent documents 1 and 2).~~

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Please amend the paragraph beginning at line 3 through line 7 as indicated below:

The optical transmission apparatuses disclosed in the ~~non~~-patent and non-patent literatures generate the RZ signal in an optical area. To generate the RZ signal in the optical area means to handle the NRZ signal in an electric area.

Page 12

Please amend the paragraph beginning at line 23 through page 13, line 2 as indicated below:

As explained above, according to the optical transmitter of the present embodiment, the differential encoder generates a differentially encoded signal based on a data signal. The RZ (return to zero) encoder generates an electric RZ differential signal as an RZ signal in the electric area based on the differentially encoded signal. The Mach-Zehnder interferometer type intensity modulator (2) generates an optical RZ- DPSK (differential phase shift keying) signal as the RZ signal in the optical area based on the electric RZ differential signal. Therefore, the optical transmitter can be made smaller, stabile, and low-cost.